



Morphological Characteristics and Diseases of Soy Plants

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ABSTRACT	<p>This article presents information about the morphological characteristics of soybean (<i>Glycine maxim</i>), its role in the food industry, its biological classification, and its cultivation.</p>
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Introduction

Nowadays, as a result of the increasing population, a number of cereal crops, including soybeans, pulses, wheat, barley, oats, lentils, beans, peas, corn, etc. demand is increasing.

Cultivation of oilseeds, firstly, helps to satisfy the demand and needs of the population for basic food products, and secondly, it becomes important in reducing the price trend. In addition, it serves to ensure the stability of valuable raw materials necessary for industry. The science and technology of raising the farming culture is developing in our republic. Wide opportunities are being created for the production of technical achievements and advanced experience. Great measures are being taken to increase the yield of crops, improve their quality, and especially to provide grain in our country. Taking into account the above and further expansion of soybean cultivation areas in the republic, creation of high-yielding and early-ripening soybean varieties, establishment of primary seed production, application of new modern agro-technologies in soybean

cultivation, provision of the population's need for soybean oil, soybean for poultry enterprises PQ-2832 of March 14, 2017 on the delivery of shroti products and measures of the President of the Republic of Uzbekistan "On measures to increase soybean planting and organize the cultivation of soybean crops in the republic in 2017-2021" In order to ensure the implementation of the number decision, the Cabinet of Ministers decides: [1,2,3,4]

Discussion And Results

Soybean is currently used as the main crop in Uzbekistan. The optimal period for sowing soybeans is from March 25 to April 5 in the southern regions, from April 1 to April 15 in the central regions, and from April 15 to April 25 in the northern regions. Early varieties of soybeans can be planted until mid-May. The time of planting as a repeat crop is carried out in June after the harvest of autumn grain crops. [5, 6]. Harvesting is carried out depending on the time of planting and the early or late ripening of the varieties. Therefore, soybean oil-free flour is used as a source of protein in the diet of poultry

and small domestic animals (sheep, goats), dairy and beef cattle. At the same time, soybean oil is also important because it is easy to digest in the human body. Milk, yogurt, cottage cheese, cheese, various meats, environmentally friendly oil are obtained from soy protein. Bread products made from soybean flour are characterized by their soft storage for several days and their nutritional value. Soybean plant is a food, fodder and technical plant. Its value is protein (40-48%) and fat (22%) in soybean seeds. It is very important to know the stages of development of the soybean plant. Timely processing, watering, feeding and harvesting process depends on the beginning and continuation of development periods. [7] At present, soy is widely used in food, technology, milk, confectionery, and canning. In addition, it is used as quality food for livestock and poultry. The use of soy in such a wide range of areas is the result of the demand for soy and its composition. Soybean plant contains organic matter: 30-52% protein, 17-27% oil, up to 20% carbonated water. [10,11] Soybean protein is slightly different from other members of the legume family, i.e., it is of high quality, easily digestible, water-soluble, and high in glycine amino acids, and according to the amino acid composition It is close to meat protein. Soybean is a valuable oil crop. According to the cited data, in 2002, soy protein production in the world accounted for 68% of plant protein, soybean oil - 3% of edible oil. 2 percent. Year-on-year consumption of soy protein has increased by 86% in the last 12 years. In 1990-1991, soybean oil consumption was 15.7 million tons, and in 2002-2003. -30.1 million in the last 20 years, the area of soybean planting in the world has doubled. In 2002, the total soybean harvest in the world was 184 million tons. [12,13] The demand for soybean production is increasing in the world, the United States is in first place (75 million tons per year), and Brazil is in second place (37.5 million tons in 2001).), third - Argentina (26 million tons in 2001). The world average yield is 2.29 t/ha. According to this indicator, Italy is the first (3.6...3.7 t/ha), Brazil is the second (2.71 t/ha), Argentina is the third (2.6 t/ha), the USA is the fourth (2.56 t/ha) ranks first. Improved quality - to develop

soybean varieties with high oil or protein content, adapted to different natural conditions and high yield. Currently, there are early-ripening, mid-ripening, and late-ripening varieties of the soybean plant. Early-ripening varieties ripen in 90-100 days, medium-ripening varieties in 110-120 days, and late-ripening varieties in 130-140 days. [8,9]

The vegetation period of a plant includes growth and development, germination, budding, budding, flowering, ripening, etc. Soybean grain needs 130-160% of its dry weight to swell and germinate. In 2-3 days after sprouting, the buds develop. The leaves of the soybean plant appear on the ground 7-8 days after the seed is planted. During the first week, the rhizome of the rhizome and the stalk of the gerbera grow by feeding on the seeds. Soybeans develop slowly during the initial growing season. The sprouted soybean grows up to 15-20 cm in 20-25 days. Three doubles of the shadow leaves are formed 5-7 days after the plant sprouts. The next ones will appear in 4-6 days. Nowadays, since soybean is a new type of crop, there are almost no diseases in it. Among the insects, spider mites and caradrina can be found, especially in the fields planted near cotton, these insects suck soybean leaves. throws [12, 13, 14, 20]

Fusarium disease: In case of Fusarium infection, the main part of the grass that germinated the plant will rot and die. Fusarium disease mainly affects soybean seeds. After severe damage, most of the seeds rot or very stunted plants grow out of them. When a soybean plant is infected with fusarium wilt during the growing season, the leaves begin to turn yellow and fall off as a result of the plant's growth and development stopping.

Root rot disease: Roots of young soybean plants infected with this disease turn brown and rot, and lateral roots stop growing. Infections of the disease are mainly preserved in seeds and soil, and disease fungi develop strongly at low temperature and high humidity.

White rot or sclerotinosis disease - This disease occurs almost everywhere where soybeans are grown. With this disease, the whole plant or some of its stems, side branches, pods and seeds are damaged. Wilting of the plant during pod formation is the first symptom

of the disease. Later (in some cases) the plant may dry up. A thick white foam appears on the affected part of the plant, the affected tissue becomes discolored, and then rots. The pods are surrounded by fungal bodies, i.e. white mycelia. Sclerotinosis disease develops strongly in humid air, in lands where seeds are sown thickly. [15]

Bacterial burns. This disease causes small needle-like spots on the leaves of the plant, which are brown at first, then turn black. Bacterial grains appear on the back of the leaf. Later, they combine to cover the entire leaf surface and dry the leaf, as a result of which the leaf falls. This disease, which is common in southern regions, is also caused by bacteria. It mainly affects the leaves, and rarely the stems and soybean pods. The disease begins with the appearance of blue and brown spots on the leaves. The leaf tissue in the affected area rises and blue spots are formed. Later, the leaf tissue turns reddish brown and dries up. Symptoms of the disease are not visible from the back of the leaf. Dry and warm weather creates favorable conditions for the spread of the disease. [16]

Fungal diseases. This disease is mainly caused by fungi. This disease affects seeds, grass, leaves and pods. At first, a thin powder forms on the upper and lower part of the seed pod leaf, then the leaf turns yellow and then falls off. In a diseased plant, it is observed that various signs are not visible. They are less branched, pods are formed in small quantities or not at all. The disease-causing fungus hibernates in the form of spores, and overwintered spores are the main source of disease spread. During the growth of the plant, fungi are spread by spores of canidia. The incubation period of the fungus depends on different conditions of the plant and air temperature. [17]

Goza night. This pest is very common. In the middle of the large forewing of the butterfly, there is a single large kidney-shaped spot, and the butterfly lays eggs in the early stages of the shadow. The body of the worm is dark green due to feeding on green leaves covered with small hairs and spots, these worms feed first on the leaves and then on the flower buds. [18, 19]

Conclusion

It is clear from this that the cultivation of soybeans brings benefits to the economy of our country from all sides, it opens the way to additional opportunities for enrichment with food and livestock products, filling the markets with cheap and high-quality delicacies. Therefore, in the future, measures are being taken to cultivate soybeans in the cluster system. In this regard, it is intended to study advanced foreign methods and develop new technologies. Not only cotton and soybeans, but also other types of crops have been researched. There is no doubt that these efforts will pay off soon.

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